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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application. Claims 1-67 are presented as follows:

1–37.   (Cancelled)

38.   (Currently Amended) A method for docking an autonomous robot in a docking station comprising:

monitoring battery voltage of the robot;

initiating docking of the robot in the docking station when the battery voltage has been detected to have fallen to a first predetermined level;

locating at least one signal for the docking station; and,

while the battery voltage remains between the first predetermined level and a second predetermined level, the second predetermined level less than the first predetermined level,

moving the robot toward the docking station.

39.   (Original) The method of claim 38, additionally comprising:

ceasing movement of the robot when the battery voltage has fallen to at least the second predetermined level.

40.   (Currently Amended) The method of claim 38, wherein the locating at least one signal for the docking station includes, seeking and detecting a signal from the docking station and detecting the signal from the docking station for a second time.

41.   (Currently Amended) The method of claim 38, wherein moving the robot toward the docking station includes,[:] moving the robot toward an obstacle.

42.   (Currently Amended) The method of claim 41, wherein moving the robot toward the docking station includes,[:] moving the robot along the obstacle to a point proximate the docking station.

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43.   (Currently Amended) The method of claim 42, wherein moving the robot toward the docking station includes,[:] the robot performing at least one wiggle movement toward the docking station.

44.   (Currently Amended) The method of claim 38, wherein moving the robot toward the docking station includes, terminating movement of the robot when the robot has reached the docking station and is in docking contact with the docking station.

45.   (Currently Amended) The method of claim 44, wherein the docking contact includes, at least one electrical contact between the robot and the docking station, the at least one electrical contact facilitating electricity for moving from the docking station to the robot for charging at least one battery in the robot.

46.   (Original) The method of claim 44, additionally comprising: the robot performing vacuuming.

47.   (Previously Presented) The method of claim 44, additionally comprising: the robot performing lawn mowing.

48.   (Currently Amended) A method for docking an autonomous robot in a docking station comprising:

    monitoring battery voltage of the robot;

    initiating docking of the robot in the docking station when the battery voltage has
         been detected to have fallen to at least a first predetermined level;

    locating at least one signal for the docking station and confirming that the at least
         one signal for the docking station has been located; and,

    while the battery voltage remains between the first predetermined level and a
         second predetermined level, the second predetermined level less than the
         first predetermined level,

    moving the robot toward the docking station.

49.   (Original) The method of claim 48, additionally comprising:

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        ceasing movement of the robot when the battery voltage has fallen to at least the second predetermined level.

    50.   (Currently Amended) The method of claim 48, wherein moving the robot toward the docking station includes,[:] moving the robot toward an obstacle.

    51.   (Currently Amended) The method of claim 50, wherein moving the robot toward the docking station includes,[:] moving the robot along the obstacle to a point proximate the docking station.

    52.   (Currently Amended) The method of claim 51, wherein moving the robot toward the docking station includes,[:] the robot performing at least one wiggle movement toward the docking station.

    53.   (Currently Amended) The method of claim 48, wherein moving the robot toward the docking station includes, terminating movement of the robot when the robot has reached the docking station and is in docking contact with the docking station.

    54.   (Currently Amended) The method of claim 53, wherein the docking contact includes at least one electrical contact between the robot and the docking station, ~~this~~ the at least one electrical contact facilitating electricity for moving from the docking station to the robot for charging at least one battery in the robot.

    55.   (Original) The method of claim 48, additionally comprising: the robot performing vacuuming.

    56.   (Previously Presented) The method of claim 48, additionally comprising: the robot performing lawn mowing.

    57–61. (Cancelled)

    62.   (Currently Amended) An autonomous robot comprising:
    a movement system for moving the robot over a surface;

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a power system for providing power to the robot, the power system including at
    least one sensor for detecting power levels;

a control system in communication with the movement system[,] and the power
    system, the control system including a processor programmed to:
        monitor the power level of the power system;
        initiate a docking process for the robot to return to the docking station
            when the power level has fallen to a first a predetermined level;
            and,

        continue the docking process by causing the robot to move toward the
            docking until the power level has fallen to a second
            predetermined level, the second predetermined level being less
            than the first predetermined level.

63.   (Previously Presented) The robot of claim 62, wherein the processor
programmed to continue the docking process includes: causing the robot to move into
contact with the docking station.

64.   (Currently Amended) The robot of claim 62, wherein the processor is
additionally programmed to: cause the robot to stop if the power level has fallen to at
least the second predetermined level.

65.   (Currently Amended) An autonomous robot comprising:
a movement system for moving the robot over a surface;
at least one sensor for detecting a signal for a docking station;
a power system for providing power to the robot, the power system including at
    least one sensor for detecting power levels; and,
a control system in communication with the movement system, the at least one
    sensor for detecting the docking station signal, and the power system, the
    control system including a processor programmed to:
        monitor the power level of the power system;

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.   initiate a docking process for the robot to return to a docking station
when the power level has fallen to a first a predetermined level;
and,

continue the docking process including:
     receiving at least one signal from the at least one sensor that a signal
     for a docking station has been detected;
     responding to the received at least one signal by causing the movement
     system to move the robot toward the docking station; and,
     continuing the docking process including, operating the robot until the
     power level has fallen to a second predetermined level, the
     second predetermined level being less than the first
     predetermined level.

66.   (Previously Presented) The robot of claim 65, wherein the processor
programmed to continue the docking process includes: causing the robot to move into
contact with the docking station.

67.   (Currently Amended) The robot of claim 65, wherein the processor is
additionally programmed to: cause the robot to stop if the power level has fallen to at
least the second predetermined level.